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MYERS BIGEL SIBLEY & SAJOVEC
PO BOX 37428
RALEIGH, NC 27627

EXAMINER	
AHLUWALIA, NAVNEET K	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/845,432
Filing Date: April 30, 2001
Appellant(s): BLAKER ET AL.

D. Scott Moore
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/29/2007 appealing from the Office action mailed 05/21/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves claims 1 – 13, 37 and 40.

Claims 6 – 9 are objected to as being dependent upon a rejected base claim, but would be allowable if the 101 rejection would be overcome and if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,511,190	Sharma et al.	4-1996

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The claimed 1-13, 37, and 40 invention is directed to non-statutory subject matter. the claimed invention is directed to a judicial exception to 35 U.S.C. 101 (i.e., an abstract idea, natural phenomenon, or law of nature) and is not directed to a practical application of such judicial exception (e.g., because the claim does not require any physical transformation and the invention as claimed does not produce a useful, concrete, and tangible result), see MPEP 2106.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 10-13, 37, and 40 rejected under 35 U.S.C. 102(b) as being anticipated by Sharma et al. ('Sharma' hereinafter), USP, 5,511,190.

With respect to claim 1,

Sharma teaches a method of searching a database (see col. 1, lines 5-7), the method comprising:

generating a hash key value based on a plurality of selector values (generating a hashed group value that serves as an index into a memory-resident hash table that maps hashed group values into corresponding memory-resident group table entries, see col. 2, lines 64-67, Sharma);

selecting an entry in the database having an address corresponding to the hash key value, wherein entries in the database include corresponding hash values (grouping involves an input procedure reading the database table row by row. For each row, values are picked up for select columns designated in a SQL group-by statement, including a group value or identifier from the group columns, and zero or more data values from the data columns. Next, a matching procedure applies a hash function to the group identifier, generating a hashed group value that serves as an index into a

memory-resident hash table that maps hashed group values into corresponding memory-resident group table entries, see col. 2, lines 63-67, Sharma);

evaluating the selected entry to determine if the entry in the database corresponds to the plurality of selector values (memory-resident hash table that maps hashed group values into entries in the output buffer, see col. 3, lines 36-38, Sharma);

incrementing the address corresponding to the hash key value if the selected entry does not correspond to the plurality of selector values (the input database table T1 212 is read row by row, the group table entry corresponding to the new row's group identifier is located, the raw salary data accumulated into the corresponding group table entry's sum.sub.-- salary field and the count field incremented. When the end of the input table T1 212 is reached, the average salary for each group (or department) can be computed by dividing the contents of the sum.sub.-- salary field by the contents of the count field, see col. 7, lines 29-37, Fig. 6, Sharma);

wherein the selecting, the evaluating and the incrementing (see col. 10, lines 55-59, Sharma) are repeated until the hash value included in selected entry has a value which indicates that entries subsequent to the selected entry will not correspond to the plurality of selector values (if the indexed entry of the hash table HT 216 points to an entry in the group table GT 218 summarizing selected data fields from the same group (315 - Y), the just read raw data are aggregated into that group entry (316) by the aggregation procedure 236. If the indexed entry of the hash table HT 216 does not point to such an entry in the group table GT 218 (315 - N), steps 317-324 are executed

depending on the availability of space in the group table GT 218 and the selected overflow option, see col. 10, lines 31-39, Sharma).

Claims 37 and 40 have the same subject matter as of claim 1 except computer-readable program code and Sharma teaches at col. 5, lines 41-42 and essentially rejected for the same reasons as discussed above.

As to claim 2,

Sharma teaches wherein the selecting, the evaluating and the incrementing (see col. 10, lines 55-59, Sharma) are repeated until an entry corresponding to the plurality of selector values is reached or until the hash value included in the selected entry has a value which indicates that entries subsequent to the selected entry will not correspond to the plurality of selector values (see col. 10, lines 31-39 and see col. 7, lines 29-37, Sharma).

As to claim 3,

Sharma teaches wherein the selecting, the evaluating and the incrementing are repeated until the selected entry is a null entry (see col. 3, lines 10-13, Sharma).

As to claim 4,

Sharma teaches wherein the selecting, the evaluating and the incrementing (see col. 10, lines 55-59, Fig. 6, Sharma) are repeated until the selected entry has a hash value greater than the hash key value (see col. 7, lines 29-37, Sharma).

As to claim 5,

Sharma teaches providing the selected entry if the selected entry corresponds to the plurality of selector values (see col. 3, lines 36-38, Sharma); and

providing an indicator of failure of the search if the selected entry includes a hash value other than the hash key value or the selected entry has a null value (see col. 3, lines 10-13, Sharma).

As to claim 6,

Sharma teaches wherein generating a hash key value based on a plurality of selector values comprises encrypting (Fig. 1, Sharma) the selector values to provide the hash key value (see col. 2, lines 64-67, Sharma).

As to claim 10,

Sharma teaches wherein the database comprises an Internet Protocol Security (IPSec) security association database and the plurality of selector values comprise IPSec selector fields (see Figs. 1, 2, Sharma).

As to claim 11,

Sharma teaches wherein the database has a size of about four times a maximum number of supported security associations (see Figs. 1, 2, Sharma).

As to claim 12,

Sharma teaches wherein the database is contained in a circular memory and wherein incrementing the address comprises: incrementing the address to a next consecutive address if the address is less than a maximum address of the circular memory (see col. 10, lines 31-39, Sharma); and

setting the address to a first address of the circular memory if the address is equal to the maximum address of the circular memory (see col. 5, lines 33-39, Figs. 1-2 , Sharma).

As to claim 13,

Sharma teaches wherein the selecting, the evaluating and the incrementing are repeated until a hash value of the selected entry is less than a hash value of a previous selected entry and the hash value of the selected entry is greater than the hash key value (see col. 10, lines 31-39, Fig. 6, Sharma).

Remarks

Ogihira et al. (USP, 6,226,634), claimed invention including "wherein entries in the database include corresponding hash values,....".

Allowable Subject Matter

4. Claims 7-9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 101, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art of records does not teach or suggests wherein encrypting the selector values to provide the hash key value comprises: grouping the plurality of selector values into blocks having a predefined number of bits; padding the blocks of grouped selector values to the predefined number of bits; encrypting the padded blocks; and truncating the encrypted padded blocks to a number of bits in the hash key value to provide the hash key value; wherein encrypting the padded blocks comprises encrypting the padded blocks using Cipher-Block-Chaining encryption mode of Data Encryption Standard (DES-CBC) encrypted; wherein the database comprises an Internet Protocol Security (IPSec) security association

database, the plurality of selector values comprise IPSec selector fields and the predefined number of bits comprises 64 bits.

(10) Response to Argument

I. Claims 1 – 13, 37 and 40 are Statutory

Appellant argues that claims 1 – 13, 37 and 40 provide useful result and are statutory.

On the contrary, Claim 1 – 13, 37 and 40 do not provide a tangible result and are not statutory. Claims 1, 37 and 40 are directed to a method, a system and a computer program product that generates, selects, evaluates based on a condition and increments based on a condition. These steps don't make the result tangible necessarily since the final result that could be seen/displayed or used in further processing is a conditional step and the previous step is just a selection which is not tangible. Furthermore, claims 37 and 40 are software per se as no processor is being used for the processing of the steps/code.

II. Claims 1 – 6, 10 – 13, 37 and 40 are Patentable

Appellant argues that the reference of record, Sharma does not teach from claims 1, 37 and 40 the entries in the database including the corresponding hash values in other words a database entry to include the hash value of the entry data as part of the entry.

On the contrary, Sharma teaches the required database entry to include the hash value of the entry data as part of the entry in column 10 lines 27 – 39 and further explained in detail in column 9 lines 31 – 57. From the cited portions the disclosure of the entry in the database having the hash value as a part it is clearly seen in the Hash table entry and the index and the aggregation of the entry.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Navneet

Navneet K Ahluwalia

AU 2166

Conferees:

Hosain Alam

Supervisory Patent Examiner

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER

Mohammad Ali

Supervisory Patent Examiner

AU 2169